IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Appln. Of

Inventor(s): Tesfai et al.   Group Art Unit: 2634

Application No.: 10/707,588   Confirmation No.: 1587

Filing Date: December 23, 2003   Attorney Docket No.: Cognio38US2

Title: SYSTEM AND METHOD FOR JOINT MAXIMAL RATIO COMBINING USING TIME-DOMAIN BASED SIGNAL PROCESSING

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

Pursuant to the duty of disclosure requirements of 37 CFR 1.56, this Information Disclosure Statement is being submitted for entry in the above-identified application. It is being filed before the undersign's knowledge of the mailing of the first Office Action on the merits. Thus, no fee is believed due.

Attached is a form PTO-1449, together with copies of the cited references. The Examiner's consideration of the references is respectfully requested.

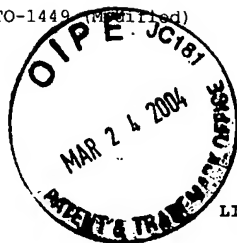Respectfully submitted,

D. Andrew Floam
Reg. No. 34,597
Date: March 23, 2004

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I, D. Andrew Floam, hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450 Alexandria, VA 22313-1450

COGNIO, INC.
101 ORCHARD RIDGE DRIVE, SUITE 350
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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.: Cognio38US2 GROUP ART UNIT: 2634
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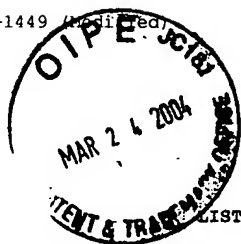
FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class/Subclass	Translation (Yes or No)
AA	WO 02/03568	1/10/2002	PCT		
AB	WO 01/45300	6/21/2002	PCT		

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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

*Examiner Initial	Author, Title, Date, Pertinent Pages, Etc
BA	Bablan et al., "Optimum Diversity Combining and Equalization in Digital Data Transmission with Applications to Cellular Mobile Radio-PartII: Numerical Results", May 1992, IEEE Transactions on Communications, Vol. 30, No. 5, Pgs. 895-907
BB	Chuah et al., "Capacity of Multi-Antenna Array Systems in Indoor Wireless Environment", November 1998, IEEE Globecom
BC	Wallace et al., "Experimental Characterization of the MIMO Wireless Channel: Data Acquisition and Analysis", February 27, 2002, Department of Electrical and Computer Engineering, Brigham Young University
BD	Love et al., "Equal Gain Transmission in Multiple-Input Multiple-Output Wireless Systems", November 2002, Proceedings of IEEE Globecom, pgs. 1124-1128
BE	Vaidyanathan et al., "The Role of Lossless Systems in Modern Digital Signal Processing: A Tutorial," IEEE Transactions on Education, Vol. 32, August 1989, pp. 181-197.
BF	Raleigh et al., "Spatio-Temporal Coding for Wireless Communication," IEEE Transactions on Communications, Vol 46., No. 3, March 1998, pp. 357-366.
BG	Jungnickel et al., "Performance of a MIMO System with Overlay Pilots," IEEE GlobeCom 2001, pp. 594-598.
BH	BLAST High-Level Overview, Lucent Technologies, July 18, 2000
BI	Golden et al., "Detection Algorithm and Initial Laboratory Results Using V-BLAST space-time communication architecture," Electronic Letters, January 7, 1999, vol. 35, No. 1.

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BJ	Golden et al., "V-BLAST: A High Capacity Space-Time Architecture for the Rich-Scattering Wireless Channel," Bell Laboratories, Lucent Technologies, Proc. Int'l Symposium on Advanced Radio Technologies, Builder, CO, September 10, 1998.
BK	Wolniansky et al., "V-BLAST: An Architecture for Realizing Very High Data Rates Over the Rich-Scattering Wireless Channel," Proc. ISSSE-98, Pisa, Italy, Sept. 29, 1998.
BL	Chizhik et al., "Keyholes, Correlations, and Capacities of Multielement Transmit and Receiver Antennas," IEEE Transactions on Wireless Communications, Vol. 1, No. 2, April 2002, pp. 361-368.
BM	Junqiang et al., "Spatial Multiuser Access with MIMO Smart Antennas for OFDM Systems," IEEE VTC '2001, September, 2001, pp. 1553-1557.
BN	Stridh et al., "MIMO Channel Capacity on a Measured Indoor Radio Channel at 5.8 GHz," Proc. Of the Asilomar Conf. on Signals, Systems & Computers, Vol. 1, October, 2000, pp. 733-737.
BO	Jungnickel et al., "A MIMO WLAN Based on Linear Channel Inversion," IEE Seminar-MIMO Communication Systems from Concept to Implementation, December, 2001, pp. 20/1-20/6.
BP	Stridh et al., "Spatial Characterization of Indoor Radio Channel Measurements at 5 GHz," SAM '2000, March, 2000, pp. 58-62.
BQ	Irner, Ralf et al., "MISO Concepts for Frequency-Selective Channels," 2002 International Zurich Seminar on Broadband Communications Access, February 19-21, 2002.
BR	Choi, Ruly Lai-U et al., "MISO CDMA Transmission with Simplified Receiver for Wireless Communication Handsets," IEEE Transactions on Communications, Vol. 49, No. 5, May, 2002.
BS	Meyer-Ottens, Sven et al., "Downlink Beamforming for W-CDMA Using Feedback and Interference Estimate," March 9, 2001.
BT	Brunner, Christopher et al., "Downlink Beamforming for WCDMA Based on Uplink Channel Parameters," Proc. EPMCC 1999, pages 375-380, March 1999.
BU	Yang, Jian et al., "On Joint Transmitter and Receive Optimization for Multiple-Input-Multiple-Output (MIMO) Transmission Systems," IEEE Transactions on Communications, Vol. 42, No. 12, December, 1994.
BV	Ivrlac, Michel et al., "On Channel Capacity of Correlated MIMO Channels," ITG Fokusprojekt: Mobilkommunikation "Systeme mit intelligenten Antennen", Ilmenau, 2001.
BW	Iserte, Antonio Pascual et al., "Pre-and Post-Beamforming in MIMO Channels Applied to HIPERLAN/2 and OFDM," IST Summit 2001 (IST Mobile Communications Summit), September, 2001.
BX	Iserte, Antonio Pascual et al., "Joint Beamforming Strategies in OFDM-MIMO Systems," ICASSP 2002 (IEEE International Conference on Acoustics, Speech and Signal Processing), May, 2002.

JCH-5/01-111a

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BY	Lee, Dennis et al., "Antenna Diversity for an OFDM System in a Fading Channel," Proceeding of IEEE MILCOM 1999, November, 1999, pages 1104-1109.
BZ	Jakes, William C., "Microwave Mobile Communications," Copyright 1974, pages 313-320 and 489-498.
CA	Yeh, Y.S., "An Analysis of Adaptive Retransmission Arrays in a Fading Environment," The Bell System Technical Journal, October, 1970, pages 1811-1825.
CB	Morgan, Samuel P., "Interaction of Adaptive Antenna Arrays in an Arbitrary Environment," The Bell System Technical Journal, January, 1965, pages 23-47.
CC	Aziz, Abdul M.K. et al., "Indoor Throughput and Range Improvements using Standard Compliant AP Antenna Diversity in IEEE 802.11a and ETSI HIPERLAN/2," Vehicular Technology Conference, 2002, VTC 2001, October 7-11, 2001, IEEE VTS 54th, Volume 4, pages 2294-2298.
CD	Iserte, Antonio Pascual et al., "Iterative Algorithm for the Estimation of Distributed Sources Localization Parameters," SSP 2001 (11th IEEE Workshop on Statistical Signal Processing), August, 2001.
CE	Heath, Robert W., Jr., "A Simple Scheme for Transmit Diversity Using Partial Channel Feedback," Signals, Systems & Computers, Conference Record of the Thirty-Second Asilomar Conference November 1-4, 1998, Vol. 2, pages 1073 – 1078.
CF	"Lucent's 'BLAST' chips to Take Off in Wireless Market," October 16, 2002, Semiconductor Business News.
CG	"Lucent Technologies' Chips Poised to Bring 'BLAST' Multiple Input/Multiple Output Technology to Laptops, PDA's and Other Mobile Devices," October 16, 2002, Lucent Technologies.

EXAMINER   DATE CONSIDERED

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* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s)